## (19) World Intellectual Property Organization

International Bureau



## S CORDS BUILDING IN CORNE DING BOND BOND WITH HE WILL BOND BOND BUILD BUILD BUILD BUILD BUILD BUILD BOND BUILD

(43) International Publication Date 24 December 2003 (24.12.2003)

PCT

## (10) International Publication Number WO 2003/106634 A3

(51) International Patent Classification<sup>7</sup>: C12N 15/74

C07H 21/04,

(21) International Application Number:

PCT/US2003/018666

(22) International Filing Date: 13 J

13 June 2003 (13.06.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/388,831 60/472,189 13 June 2002 (13.06.2002) US 20 May 2003 (20.05.2003) US

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier applications:

US Filed on 60/472,189 (CIP) 20 May 2003 (20.05.2003)

US 25 May

Filed on

60/338,831 (CIP) 13 June 2002 (13.06.2002)

(71) Applicant (for all designated States except US): CHI-RON CORPORATION [US/US]; 4560 Horton Street, Emeryville, CA 94608-2916 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): HARDY, Stephen, F. [US/US]; C/O Chiron Corporation, P.O. Box 8097, Emeryville, CA 94662-8097 (US). DONNELLY, John, J., III [US/US]; C/O Chiron Corporation, P.O. Box 8097, Emeryville, CA 94662-8097 (US). ZUR MEGEDE, Jan,

T. [DE/US]; C/O Chiron Corporation, P.O. Box 8097, Emeryville, CA 94662-8097 (US).

- (74) Agents: LILLIS, Marcella et al.; Chiron Corporation, Intellectual Property-R338, P.O. Box 8097, Emeryville, CA 94662-8097 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 23 December 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: VECTORS FOR EXPRESSION OF HML-2 POLYPEPTIDES

(57) Abstract: A nucleic acid vector comprising: (i) a promoter; (ii) a sequence encoding a HML-2 polypeptide operably linked to said promoter; and (iii) a selectable marker. Preferred vectors comprise: (I) a eukaryotic promoter; (ii) a sequence encoding a HML-2 polypeptide downstream of and operably linked to said promoter; (iii) a prokaryotic selectable marker; (iv) a prokaryotic origin of replication; and (v) a eukaryotic transcription terminator downstream of and operably linked to said sequence encoding a HML-2 polypeptide. Vectors of the invention are particularly useful for expression of HML-2 polypeptides either in vitro (e.g. for later purification). Or in vivo (e.g. for nucleic acid immunization). They are well suited to nucleic acid immunization against prostrate tumors. A preferred HML-2 is PCAV, which is located in chromosome 22 at 20.428 megabases (22q11.2).

